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1. Method of transmitting on a network having at least one switch enabling information (301) to be transmitted on at least one path between a so-called "source" node (100) and a so-called "destination" node during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including on the one hand so-called "user" data and on the other hand additional data (308 to 311) defining notably the path on the said network which the said user data will follow,

when each packet is received, the destination node performs:

- an operation of reading the said additional data (601), and
- an operation of determining the transmission mode (602),

connected or non-connected, taking into account at least some of the said additional data,

characterised in that,

the said additional data (308 to 311) include a data item representing a virtual channel (309) and a data item representing the source node (310) and, during the determination operation, the destination node takes into account the said data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or not.

2. Transmission method according to Claim 1, characterised in that the destination node has a memory (504) in which additional so-called "reference" data are stored and the operation of determining the transmission mode includes an operation of comparing the said additional reference data and additional data read during the reading operation.

3. Transmission method according to Claim 2, characterised in that, during the transmission mode determination operation, the transmission mode is determined as connected when on the one hand the said additional

data read and on the other hand the said additional reference data are identical.

a 4. Transmission method according to ~~any one of Claims 1 to 3~~<sup>claim</sup>, characterised in that when, during the transmission mode determination operation, it is determined that the transmission mode is non-connected, the method includes an operation of reading (604), in the first packet containing the said information, additional data (304 to 307) relating to the said information and intended to organise its transmission.

a 5. Transmission method according to ~~any one of Claims 1 to 4~~, characterised in that, when the transmission mode is connected, the method includes an operation of reserving a virtual channel (205) between the source node and the destination node, the said reservation operation being effected as a preliminary to a transmission of the said information.

6. Method of sending by a so-called "source" node, on a network having at least one switch, enabling information (301) to be transmitted on at least one path between the source node (100) and a so-called "destination" node during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including on the one hand so-called "user" data and on the other hand additional data defining notably the path on the said network which the said user data will follow,

characterised in that:

- at each sending of information in connected mode, the source node performs an operation of reserving a virtual channel (205) between the said source node and the said destination node, a virtual channel which the said information will follow, and

- at each sending of a packet of the said information, in connected mode, the source node performs an operation of determining the said additional data, during which the said additional data determined represent:

- on the one hand a unique identifier of the source node in the said network, and

- on the other hand, the said virtual channel.

7. Method of receiving by a so-called "destination" node, on a  
 5 network having at least one switch, for receiving information on at least one  
 path coming from a so-called "source" node, the said network being adapted to  
 transmit data in at least one connected mode and at least one non-connected  
 mode, the said session including the transmission of at least one packet, each  
 packet including on the one hand so-called "user" data and on the other hand  
 10 additional data defining notably the path on the said network which the said  
 user data will follow,

when each packet is received, it includes:

- an operation of reading the said additional data,
- an operation of determining the transmission mode, connected  
 15 or non-connected, taking into account at least some of the said additional data,  
 characterised in that,

the said additional data include a data item representing a virtual  
 channel and a data item representing the source node and, during the  
 determination operation, the destination node takes into account the said data  
 20 items representing both the virtual channel and the source node in order to  
 determine the transmission mode, connected or not.

8. Reception method according to Claim 7, characterised in that  
 the destination node has a memory in which additional so-called "reference"  
 data are stored and in that the operation of determining the transmission mode  
 25 includes an operation of comparing the said additional reference data and  
 additional data read during the reading operation.

9. Reception method according to Claim 10, characterised in that,  
 during the transmission mode determination operation, the transmission mode  
 is determined as connected when the said additional data are identical.

a 30 10. Reception method according to ~~any one of Claims 7 to 9~~,  
 characterised in that when, during the transmission mode determination

operation, it is determined that the transmission mode is non-connected, the method includes an operation of reading, in the first packet containing the said information, additional data relating to the said information and intended to organise its transmission.

5                    11. Reception method according to ~~any one of Claims 7 to 10~~, characterised in that, when the transmission mode is connected, the method includes an operation of reserving a virtual channel between the source node and the destination node, the said reservation operation being effected as a preliminary to a transmission of the said information.

10                    12. Device for transmitting on a network having at least one switch enabling information to be transmitted on at least one path between a so-called "source" node and a so-called "destination" node during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said  
15 session including the transmission of at least one packet, each packet including on the one hand so-called "user" data and on the other hand additional data defining notably the path on the said network which the said user data will follow,

                    the destination node having a processing means adapted, each  
20 time a packet is received:

- to read the said additional data in the said packet, and
- to determine the transmission mode, connected or non-connected, taking into account at least some of the said additional data,

characterised in that:

25                    the source node has a means of determining additional data adapted so that the additional data include a data item representing a virtual channel, a data item representing the source node and the processing means of the destination node taking into account the said data items representing both the virtual channel and the source node in order to determine the  
30 transmission mode, connected or non-connected.

13. Transmission device according to Claim 12, characterised in that the destination node has a memory in which additional so-called "reference" data are stored and in that the processing means of the source node is adapted to compare the said additional reference data and additional data read in the said packet.

14. Transmission device according to Claim 13, characterised in that the processing means of the destination node is adapted to determine that the transmission mode is connected when on the one hand the said additional data read and on the other hand the said additional reference data are identical.

15. Transmission device according to ~~any one of Claims 13 to 14~~, characterised in that, when the processing means of the destination node has determined that the transmission mode is non-connected, to read, in the first packet containing the said information, additional data relating to the said information and intended to organise its transmission.

16. Transmission device according to ~~any one of Claims 13 to 15~~, characterised in that the processing means of the destination node is adapted to reserve a virtual channel, in cooperation with the source node, and to effect the said reservation in order to effect the reception of information in connected mode.

17. Device for sending from a so-called "source" node, on a network having at least one switch, enabling information to be transmitted on at least one path between the source node (100) and a so-called "destination" mode during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including on the one hand so-called "user" data and on the other hand additional data defining notably the path on the said network which the said user data will follow,

characterised in that it has:

- a reservation means adapted, on each sending of information in connected mode, to effect a reservation of a virtual channel between the said source node and the said destination node, a virtual channel which the said information will follow, and

5           - a means of determining additional data, adapted, each time a packet of the said information is sent, in connected mode, to perform an operation of determining said additional data representing:

- on the one hand a unique identifier of the source node in the said network, and

10           • on the other hand, the said virtual channel.

18. Reception device of a so-called "destination" node, on a network having at least one switch, for receiving information on at least one path coming from a so-called "source" node, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including on the one hand so-called "user" data and on the other hand additional data defining notably the path on the said network which the said user data will follow,

20           said reception device having a processing means adapted, each time a packet is received:

- to read the said additional data, and
- to determine the transmission mode, connected or non-connected, taking into account at least some of the said additional data, characterised in that:

25           the said additional data include a data item representing a virtual channel, a data item representing the source node and the processing means of the destination node is adapted to take into account the said data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or not.

30           19. Reception device according to ~~any one of~~ Claim 18, characterised in that it has a memory in which additional so-called "reference"

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a method including, performed by the source node:

~~-an operation of sending (205), by the source node, at least one packet of said user data and the said additional outward data which relate to it,~~

- the method including, performed by the destination node, on reception of each packet:

- an operation of reading (602, 604) the said identifier in the said additional outward data, and

- an operation of checking (604) the correct reception of the user data and, in the event of correct reception:

· an operation of determining additional return data (609, 610) defining notably a path going from the said destination node to the node identified by the said identifier, and ;

an operation of acknowledging (611) by sending acknowledgement data indicating the correct reception of the said user data and of the said additional return data.

characterised in that:

during the additional outward data determination operation (201 to 203), the source node defines additional outward data representing a virtual channel which the said user data must follow, the unique identifier of the source node being placed in addition to said virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data, without any ambiguity.

32. Transmission method according to Claim 31, characterised in that, during the additional return data determination operation (609, 610), the destination node determines additional return data representing the virtual channel which the acknowledgement data must follow.



a method including:

- an operation of sending (205), by the source node, at least one user data and the said additional outward data which relate to it,

34. Method according to Claim 33, characterised in that it reception of a packet in return, coming from a said destination net including acknowledgement information:

- an operation of reading (207) a virtual channel identifier by the said acknowledgement information, and
- an operation of comparing (207) the said identifier received and channel identifier used during the sending operation.

said method including on reception of each packet coming from  
ode, and performed by the destination node:

- an operation of reading (604) an identifier in additional outward data transmitted, in the said packet, with user data, and
- an operation of checking the correct reception of the user data

and, in the event of correct reception:

· an operation of determining additional return data (609, 610) defining notably a path going from the said destination node to the node identified by the said identifier, and

· an operation of acknowledging by sending acknowledgement data indicating the correct reception of the said user data and of the said additional return data,

characterised in that:

it more particularly includes an operation of reading said unique "source" node identifier, in addition to a virtual channel which the said user data must follow.

36. Reception method according to Claim 35, characterised in that, during the additional return data determination operation (609, 610), the destination node determines additional return data representing the virtual channel which the acknowledgement data must follow.

37. Reception method according to ~~either one of Claims 35 or 36,~~ characterised in that, during the additional return data determination operation (609, 610), the destination node incorporates, in the additional return data, a virtual channel identifier represented by additional data received from the source node.

38. Device for transmitting user data on a switched network between a so-called "source" node (10) having a unique identifier on the said network and a so-called "destination" node (50),

the said source node having:

- a means of determining (104 to 106) additional outward data defining notably, in its entirety, the path to be followed on the said network by the said user data, and

- a means of sending (103), by the source node, at least one packet of said user data and the said additional outward data which relate to it,

- the additional outward data determination means of the source node being adapted to define additional outward data representing the said unique identifier of the source node, and

• a means of reading (504 to 506) the said identifier in the said outward data of each packet, and

· check the correct reception of the user data and, in the event of  
option,

· determine additional return data defining notably a path going from the source node to the node identified by the said identifier, and

- a means of sending acknowledgement data indicating the reception of the said user data and of the said additional return data.

the additional outward data determination means is adapted to  
onal outward data representing a virtual channel which the said  
ust follow, the unique identifier of the source node being placed in  
aid virtual channel, thereby enabling the destination node to identify  
channel used by the user data without any ambiguity.

39. Transmission device according to Claim 38, characterised in that the additional return data determination means is adapted to determine the return data representing the virtual channel which the element data must follow.

- a means of determining (104 to 106) additional outward data  
ably, in its entirety, the path to be followed on the said network by  
r data, in order to reach a so-called "destination" node (50), and

- a means of sending (103) at least one packet of said user data and additional outward data which relate to it,

- the means of determining additional outward data is adapted to additional outward data representing the said unique identifier of the

source node, in addition to a virtual channel number which the said user data must follow.

41. Sending device according to Claim 40, characterised in that it has:

- 5       • a means (103) of receiving a packet coming from the destination node, a packet including acknowledgement information,
- a means (104 to 106) of reading a virtual channel identifier represented by the said acknowledgement information, and
- a means (104 to 106) of comparing the said identifier received
- 10     and the virtual channel identifier used during the sending operation.

42. Reception device of a so-called "destination" node (50), for receiving user data on a switched network, data coming from a so-called "source" node (10) having a unique identifier on the said network

said device having:

- 15       • a means of reading (504 to 506) an identifier in additional outgoing data transmitted, in the said packet with user data, and
- processing means (504 to 506) adapted
  - to check the correct reception of the user data,
  - to determine additional return data defining notably a path
- 20     going from the said destination node to the node identified by the said identifier,
- means (103) of sending on the one hand additional return data and on the other hand acknowledgement data indicating the correct reception of the said user data.

characterised in that:

- 25       it more particularly includes a means of reading said unique source node identifier, in addition to a virtual channel which said user data must follow.

- 30       43. Reception device according to Claim 42, characterised in that the additional return data determination means (504 to 506) is adapted to determine additional data representing the virtual channel which the acknowledgement data must follow.

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a 44. Reception device according to ~~either one of Claims 42 or 43~~, characterised in that the additional return data determination means (504 to 506) is adapted to incorporate, in the additional return data, a virtual channel identifier represented by additional data received from the source node.

5 a 45. Camera, characterised in that it has a management device according to ~~any one of Claims 38 to 44~~.

a 46. Facsimile machine, characterised in that it has a management device according to ~~any one of Claims 38 to 44~~.

a 10 47. Photographic apparatus, characterised in that it has a management device according to ~~any one of Claims 38 to 44~~.

a 48. Computer, characterised in that it has a management device according to ~~any one of Claims 38 to 44~~.

a 49. Television receiver, characterised in that it has a management device according to ~~any one of Claims 38 to 44~~.

15 a 50. A storage medium storing instructions of a computer program implementing the transmission method according to ~~any one of Claims 31 to 32~~.

a 51. A storage medium storing instructions of a computer program implementing the sending method according to ~~any one of Claims 33 to 34~~.

a 20 52. A storage medium storing instructions of a computer program implementing the reception method according to ~~any one of claims 35 to 37~~.

a 53. A storage medium according to ~~any one of claims 50 to 52~~, characterised in that said storage medium is removable.

a 54. A storage medium according to ~~any one of claims 50 to 53~~, characterised in that said storage medium is a floppy disk or a CD-ROM.

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